

Message

From: Battey, Todd@Waterboards [Todd.Battey@waterboards.ca.gov]
Sent: 4/15/2015 12:16:03 AM
To: donald.gronstal@us.af.mil
CC: Joe Ebert (joseph.ebert@us.af.mil) [joseph.ebert@us.af.mil]; Daftary, David [David.Daftary@CBIFederalServices.com]; Terpolilli, Christopher [cterpolilli@cbifederaleservices.com]; Unruh, Mark [Mark.Unruh@CBIFederalServices.com]; Calvin Cox (Calvin.Cox@cn-bus.com) [Calvin.Cox@cn-bus.com]; Susan Soloyanis[Susan@sologeo.com] (Susan@sologeo.com) (Susan@sologeo.com) [Susan@sologeo.com]; Aycock, Mary [Aycock.Mary@epa.gov]; ibalkissoon@techlawinc.com; Bruck, Glenn [Bruck.Glenn@epa.gov]; Mitton, Cindi@Waterboards [cindi.mitton@waterboards.ca.gov]; Stone, Linda@Waterboards [linda.stone@waterboards.ca.gov]
Subject: RE: Former GAFB April 2015 Basewide Groundwater Sampling Event

Please find below comments from the Regional Water Quality Control Board, Lahontan Region (Water Board) on the Tech Memo that was emailed on March 16, 2015, and titled "Former George AFB – Fall 2015 [apparent typo that should be "Spring 2015"] Basewide Groundwater Sampling Event" and supporting information related to the upcoming April 2015 sampling event that was subsequently emailed.

Comment 1. We request that prior to future sampling events (after the April 2015 event) the Air Force present a conceptual site model (CSM) for each site being monitored as part of the basewide event. Each CSM should include an evaluation of vertical trends in groundwater concentrations, which is critical to understand what depth in the water column is appropriate for sampling. Vertical concentration trends can be evaluated by a variety of techniques, including nested wells, multi-depth groundwater sampling within an existing well, or drilling and multi-depth HydroPunch™ groundwater sampling. In some situations vertical concentration trends may be inferred from the type of release and/or site conditions. For example, in the vicinity of floating free product, the dissolved concentrations would be expected to be highest at the top of the water column and decrease with depth.

Comment 2. The groundwater sampling proposed in Table 1 for the April 2015 event includes wells with screens that are entirely submerged by as much as 156 feet of water (MW-148). Another example is MW-149, where the top of the well screen is over 77 feet below the top of the Lower Aquifer at the groundwater monitoring well closest to the drinking water supply well Adelanto 4 on the southeast side of the Site OT071 pesticide plume. The vertical concentration trends need to be understood as described in Comment 1 to evaluate the usability of wells with submerged well screens. If the dieldrin concentrations in the Lower Aquifer are highest at the top of the water table and decrease with depth, well MW-149 may underestimate the dieldrin concentration near the Adelanto water supply well. More generally, we request that wells with submerged well screens be evaluated considering possible vertical concentration trends to determine if these wells are usable for the intended groundwater monitoring purposes. We suggest that this evaluation be completed and recommendations included in the report that is currently being prepared to summarize the 2014 groundwater monitoring data. Note that concerns regarding submerged well screens have been raised before by the Water Board, including in comments on the Draft Supplemental Site Investigation Report and Optimization Plan, Operable Unit 3 Site ZZ051 (3/16/15). Previous explanations of why submerged wells screens are not a problem provided by the Air Force's consultant do not adequately address this issue.

Comment 3. Groundwater sampling is currently being conducted with the low-flow pump inlet being placed in the middle of the saturated well screen. If the groundwater concentrations are highest at the top of the water table and decrease with depth, samples collected in the middle of the screen may be biased low relative to the maximum concentration at a given location. We request that the placement of the pump inlets relative to the screened intervals be evaluated considering possible vertical concentration trends described in Comment 1. The pump inlets for future sampling events (after the April 2015 event) should be placed to sample the maximum concentrations that are present within the water column of the target aquifer at each well location. We suggest that this evaluation be completed and recommendations included in the report that is currently being prepared to summarize the 2014 groundwater monitoring data.

Please respond to these comments and provide a schedule for addressing the requested items.

You may contact me at (760) 241-7340, Todd.Battey@waterboards.ca.gov, or Cindi Mitton at (760) 241-7413, Cindi.Mitton@waterboards.ca.gov, if you have any questions regarding these comments.

Todd

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From: Terpolilli, Christopher [<mailto:cterpolilli@cbifederaleservices.com>]

Sent: Monday, March 16, 2015 2:13 PM

To: GRONSTAL, DONALD K GS-12 USAF HAF AFCEC/CIBW (donald.gronstal@us.af.mil) (donald.gronstal@us.af.mil); Stone, Linda@Waterboards; Mitton, Cindi@Waterboards; Battey, Todd@Waterboards; aycock.mary@epa.gov; bruck.glenn@epa.gov; ibalkissoon@techlawinc.com; Susan Soloyanis[Susan@sologeo.com] (Susan@sologeo.com) (Susan@sologeo.com); Calvin Cox (Calvin.Cox@cn-bus.com); Daftary, David

Cc: Unruh, Mark; Kitchings, Ken; Thomas, Mark; Mall, Robert

Subject: Former GAFB April 2015 Basewide Groundwater Sampling Event

BCT Members

Please find attached a tech memo outlining details of the upcoming April 2015 basewide annual groundwater monitoring event at former George AFB.

The field work is tentatively scheduled to commence on April 13th, 2015, and is estimated to last approximately 2-3 weeks.

Please feel free to contact me if you have any questions.

Regards

Chris

Note: the Irvine CB&I Federal Services LLC office address has changed (see below).



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